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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/474,766	12/30/1999	WILLIAM JAMES IMOEHL	051252-5028	2689

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MORGAN LEWIS & BOCKIUS LLP
1111 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004

EXAMINER

KIM, CHRISTOPHER S

ART UNIT PAPER NUMBER

3752

DATE MAILED: 10/08/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/474,766

Applicant(s)

IMOEHL, WILLIAM JAMES

Examiner

Christopher S. Kim

Art Unit

3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 Jan 2001 & 20 Aug 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Amendment filed August 20, 2003 is acknowledged.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Drawings

3. The drawings (figure 2) were received on August 20, 2003. These drawings are acceptable.
4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "swirl generator disk comprising a first surface and a second surface, the first surface of the swirl generator disk adjacent the armature, the second surface of the swirl generator disk adjacent the first face of the seat; and a guide disk comprising a first surface and a second surface, the first surface of the guide disk adjacent the outlet portion, the second surface of the guide disk adjacent the first surface of the swirl generator disk" recited in claim 5; the "swirl generator disk comprising a first surface and a second surface, the first surface of the swirl generator disk adjacent the inlet portion of the body, the second surface of the swirl generator disk adjacent the first face of the seat; and a guide disk comprising a first surface and a second surface, the first surface of the guide disk adjacent the outlet portion of the body, the second surface of the guide disk adjacent

the first surface of the swirl generator disk" recited in claim 10 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. Claims 5, 6 and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The term "adjacent" in claims 5 and 10 has been considered to mean "next to" rather than "near" to give a meaningful interpretation to the claims. "Near" interpretation of the term "adjacent" would render the claim indefinite for the use of a relative term without a definition of scope. The specification fails to teach the orientation of the swirl generator and the guide disk as specified in claims 5 and 10.

Claim 5: the "swirl generator disk comprising a first surface and a second surface, the first surface of the swirl generator disk adjacent the armature, the second surface of the swirl generator disk adjacent the first face of the seat; and a guide disk comprising a first surface and a second surface, the first surface of the guide

disk adjacent the outlet portion, the second surface of the guide
disk adjacent the first surface of the swirl generator disk”

Claim 10: the “swirl generator disk comprising a first surface and a second
surface, the first surface of the swirl generator disk adjacent the
inlet portion of the body, the second surface of the swirl
generator disk adjacent the first face of the seat; and a guide
disk comprising a first surface and a second surface, the first
surface of the guide disk adjacent the outlet portion of the body,
the second surface of the guide disk adjacent the first surface of
the swirl generator disk”

6. Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to
comply with the written description requirement. The claim(s) contains subject matter
which was not described in the specification in such a way as to reasonably convey to
one skilled in the relevant art that the inventor(s), at the time the application was filed,
had possession of the claimed invention.

Regarding claims 1, 8 and 12, the claims recite “a seat disposed within the body.”
The term “within” can be given two interpretations: (1) “completely within”, which
excludes any configuration in which the seat may be partially outside the body or in
which the seat or any portion of the seat is at the perimeter of the body; or (2) “partially
within”, which does not preclude the seat being partially outside the body or at the
perimeter of the body. The first interpretation is not enabled by applicant’s disclosure as
originally filed. Figure 1 shows the seat protruding beyond the body and figure 2 shows

the seat flush with the body at the outlet (a portion of the seat is at the perimeter of the body). The specification, on page 4, lines 7-8, discloses, "A seat 64, which is preferably a metallic material, is located at the outlet portion 62." While, the second interpretation is enabled, Hans et al. teaches such a seat and body configuration.

Claims 1 and 8 (and similarly in claim 12) recite "the intermediate zone contiguously engaging the passageway of the neck portion of the body." The "passageway" is in reference to the fuel passageway. The fuel does not appear to flow through the portion of the body which is in contact with the intermediate zone.

Claim Rejections - 35 USC § 102

7. Claims 1-4, 8, 9, 11-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Hans et al. (4,634,055).

Hans et al. discloses a fuel injector comprising: a fuel inlet (inlet above element 15); a fuel outlet 23; a fuel passageway (passageway from inlet above element 15 to outlet 23); a body 1; an armature 14; a needle 17; a seat 9; a seal (between element 9 and element 1).

Claim Rejections - 35 USC § 103

8. Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hans et al. (4,634,055) in view Daley et al. (5,098,064).

Hans et al. discloses the limitations of the claimed invention with the exception of polytetrafluoroethylene. Daley et al. discloses, in column 6, lines 2-8,

polytetrafluoroethylene seals. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have made the seal of Hans et al. of polytetrafluoroethylene as taught by Daley for ease in shaping.

Response to Arguments

9. Applicant's arguments filed August 20, 2003 have been fully considered but they are not persuasive.

Applicant alleges that the features not shown in the drawings, as identified above, would be understood by one of ordinary skill in the art. 37 CFR 1.83(a) requires that the drawings must show every feature of the invention specified in the claims. Applicant further argues that one of ordinary skill in the art would understand the manner in which the guide disk and swirl disk are oriented. The examiner does not understand the orientation of the guide disk and swirl disk CLAIMED by applicant. Is the examiner to assume and limit the claims to applicant's entire disclosure, including the drawings? The claims have been interpreted in light of the specification but the specification has not been read into the claims as a limitation.

Applicant argues that Hans et al. does not disclose the seat disposed within the body nor the zone contiguous to the passageway of the body. See rejection under 35 U.S.C. 112, first paragraph above. Additionally, Hans et al. discloses the downstream end of body 1 contiguous with the intermediate zone of seat 9.

Applicant argues that some explanation or objective evidence must be shown to explain the conclusion that Hans et al. is capable of thermally isolating a specific portion

of a seat. Element A, solid passive object or material, between two other objects or materials C and D inherently impedes heat transfer between C and D compared to C and D in contact with one another without A in between. One of ordinary skill in the art would know this basic concept of thermal conductivity.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Daley et al. provides the motivation in column 6, lines 2-8 as indicated in the prior Office action and repeated above.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (703) 308-8336. The examiner can normally be reached on Monday - Thursday, 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Y. Mar can be reached on (703) 308-2087. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.


Christopher S. Kim
Primary Examiner
Art Unit 3752

CK
October 7, 2003